

# JAPAN

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JIS X 8341-5 (2006) (English): Guidelines for  
older persons and persons with disabilities --  
Information and communications equipment,  
software and services -- Part 5: Office equipment

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*The citizens of a nation must  
honor the laws of the land.*

Fukuzawa Yukichi

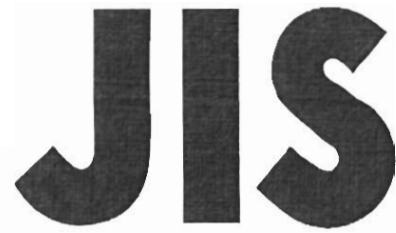
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JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

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JIS X 8341-5 : 2006

**Guidelines for older persons and  
persons with disabilities—  
Information and communications  
equipment, software and services  
—Part 5: Office equipment**

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ICS 11.180.01;35.260

Reference number : JIS X 8341-5 : 2006 (E)

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## Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal of establishing a Japanese Industrial Standard from Japan Business Machine and Information System Industries Association (JBmia) / Japanese Standards Association (JSA) with a draft based on the organization standard (JBMS-73) being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

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**JIS X 8341** series consists of the following parts under the general title “*Guidelines for older persons and persons with disabilities—Information and communications equipment, software and services*”:

*Part 1: Common Guidelines*

*Part 2: Information Communication Equipment*

*Part 3: Web Content*

*Part 4: Telecommunication Equipment*

*Part 5: Office Equipment*

Date of Establishment: 2006-01-20

Date of Public Notice in Official Gazette: 2006-01-20

Investigated by: Japanese Industrial Standards Committee

Standards Board

Technical Committee on Information Technology

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JIS X 8341-5 : 2006, First English edition published in 2007-02

Translated and published by: Japanese Standards Association  
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

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Printed in Japan

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# **Guidelines for older persons and persons with disabilities—Information and communications equipment, software and services**

## **—Part 5: Office equipment**

**Introduction** With the progress of the information society, people will increasingly use information communication equipment, software, and services such as the Internet that are made possible by information communication technology. This Japanese Industrial Standard is established as the guidelines to ensure accessibility for information and communication required primarily by elderly persons, persons with disabilities and persons with temporary disabilities when they use office equipment.

**1 Scope** This part of **JIS X 8341** is intended to improve information accessibility required when primarily elderly persons, persons with disabilities and persons with temporary disabilities (hereafter referred to as elderly persons and persons with disabilities) use office equipment. This part of **JIS X 8341** specifies a guideline to be considered for planning, developing and designing office equipment.

**NOTE :** In this part of **JIS X 8341**, office equipment refers to copying machines, multifunction devices, and page printers used in office environment. Multifunction devices correspond to the definition in **JIS X 6910**.

**2 Normative references** The following standards contain provisions which, through reference in this text, constitute provisions of this part of **JIS X 8341**. The most recent editions of standards (including amendments) given below shall be applied.

JIS X 6910 *Information technology — Office equipment — Copying machines and Multi-function devices — Information to be included in specification sheets and related test methods*

JIS X 8341-1 *Guidelines for older persons and persons with disabilities — Information and communications equipment, software and services — Part 1: Common Guidelines*

**3 Definitions** For the purpose of this part of **JIS X 8341**, the definitions given in **JIS X 8341-1** and **JIS X 6910** are applied.

## **4 General principles**

**4.1 Basic policies** The basic policies which shall be followed with respect to office equipment in order to ensure and improve information accessibility are as follows:

- a) During the planning, developing, and designing phases for office equipment, consideration shall be given to ensure that elderly persons and persons with disabilities are able to use the equipment.
- b) During the planning, developing and designing phases for office equipment, consideration shall be given to user needs, information accessibility shall be evaluated, and its evaluation result shall be reflected to the equipment.
- c) The safety of the provided information accessibility features shall be ensured.
- d) Even when information accessibility features are added, it shall not disrupt and disable any functions that were activated previously.

**4.2 Basic requirements** In order to ensure and improve the information accessibility of office equipment, the following basic requirements related to the physical abilities of users shall be considered (see **3.2** of **JIS X 8341-1**). However, this part of **JIS X 8341** does not require office equipment to comply with all the basic requirement, but does require that the office equipment complies with at least one of them.

NOTES 1 Two types of features may be used to satisfy the requirements: common functions and alternate functions.

- a) Common functions: These functions are commonly used by a variety of users.
- b) Alternate functions: These are used as alternatives to specific functions. For instance, voice-based functions used as an alternative to displaying would be considered an alternate function.

2 Two methods for providing functions are available: incorporation into main equipment and optional equipment.

- a) Office equipment shall be operable even when it is difficult to obtain information through vision.

NOTE : Since users with visual disabilities, colour blindness, reduced visual acuity due to aging, and other such conditions may have difficulty in locating the positions and functions of operable controls, keys, switches, and other objects, alternate methods shall be provided for users with limited vision and/or without vision.

Example 1 Auditory feedback as well as visual information are provided to notify users of an operating state or an error.

Example 2 The "5" key on a numeric keypad has a tactile label (nib) [see **4.1 b**) of **JIS S 0011**].

Example 3 Important keys for operations, such as Start key and Stop key, are shaped differently so that they can be identified by touch.

Example 4 Operable controls such as operation handles and guides are tactually discernible due to their unique shape on tactile marks (bumpy shapes, etc.).

Example 5 Power switches and other similar important keys are designed with some type of obstruction such as protective barrier around the keys or to be located in a recess so that they may not be pressed accidentally.



- Example 6 An end corner reference is provided on the document setting position, so that users can place a document on the original platen glass by touch.
- Example 7 The lines indicating the maximum capacity of documents that can be loaded into the automatic document feeder's document tray, and the maximum capacity of sheets of paper that can be loaded into the paper feed tray or paper cassette, are tactile as well as visible.
- Example 8 Auditory signals, such as input, invalid input, and base point tones are used for key operation feedbacks.
- Example 9 The office equipment has an auditory signal at the base point position when using toggle keys.
- Example 10 Black and white reversed screen display is provided so that the display is easier to view for users with low vision.
- Example 11 A magnified view of information on the display is provided.
- Example 12 Display methods whereby providing information in one location is through a change in colour only are not used.
- Example 13 Operation using voice recognition or voice guidance is provided.
- b) Office equipment shall be operable without user hearing.
- NOTE : In the case where information is only provided auditorily, this information may be lost due to hearing impairments, noisy environments, or environments where sound is forbidden. For this reason, alternate methods are to be provided to users with limited hearing and/or without hearing.
- Example 1 Visual information such as screen display as well as auditory information are provided to notify users of an operating status or equipment error.
- Example 2 Notification of the facsimile function's reception, paper/supply, paper jam, and other issues is provided with visual information, such as light blinking indication or status indication on a screen, as well as auditory information.
- c) Office equipment shall be operable even when operation through speech is difficult.
- When the information use and operation by speech is a main function, alternate methods not requiring speech shall be provided.
- Example : Equipment operated by voice recognition is operable through key input as well.
- d) Office equipment shall be operable irrespective of physique.
- Example 1 The display is set in a legible position and the operable controls are set in a position where input operations through keys entries and other methods are possible, regardless of differences in height of users.
- Example 2 The position and angle of operable controls are adjustable for users. For instance, an angle of the control panel is adjustable.

Example 3 The main operable controls of office equipment are designed in positions to allow operation by as many users as possible.

Example 4 Removing copy (sheets) from the copy-receiving tray is easy regardless of user's physique.

- e) Office equipment shall be operable or usable for people who do not have significant physical strength or fine motor control.

The mechanically operable controls of equipment shall be easy to operate without excessive force or the need for delicate operations.

NOTE : Since a required force varies depending on the shape and size of an operable control; the shape, size, and force required for operable controls shall be considered from a comprehensive standpoint.

Example 1 Operable controls do not require tight grasping, pinching, or twisting of the wrist.

Example 2 The paper feed tray and automatic document feeder are designed with springs, levers, electric motors, or other methods to reduce the operational power required for opening and closing.

Example 3 The paper guide or the document guide is easy to align with the paper or document, even if users lacks physical strength or control capability.

- f) Office equipment shall be operable by persons with lower body impairments.

Example 1 The office equipment is operable by persons with limited movements in legs, arms, fingers, or artificial limbs.

Example 2 Users can operate the equipment without crouching.

Example 3 The office equipment has handles that can be used to support users.

Example 4 The office equipment is operable with one hand, considering users who use crutches and other such aids.

Example 5 The office equipment is operable by remote control as well as the control panel.

- g) Office equipment shall be operable from a seated position such as from a wheelchair.

NOTE : The display of office equipment shall be placed at a legible position, and the operable controls shall be placed in a position that can be reached with the hands, so that those who use wheelchairs can operate the office equipment from a seated position. Otherwise, alternate methods shall be provided.

Example 1 The control panel is in the front of the main unit.

Example 2 The control panel's angle is adjustable to users.

Example 3 The operable controls and scanner is separable from the paper output (or printing) portion of the device.

Example 4 For desktop office equipment where the office equipment is placed on a desk 700 mm above the floor, the operable controls are within the reach of users and at a distance from which they are legible.

- Example 5 For office equipment located on the floor, the paper feed tray or at least one paper cassette is positioned 380 mm or higher above the floor.
- Example 6 Wheelchair user can stop the automatic document feeder or platen cover when opening and closing at any position.
- Example 7 Users can operate the office equipment from wheelchair alongside the office equipment with one hand only, and simultaneous operations with two hands are not required.
- Example 8 The office equipment is operable with remote control devices as well as the main body's control panel.
- Example 9 Automatic document feeder trays and other such trays are transparently coloured so that documents are visible through the trays.
- h) Office equipment shall be operable with either hand.
- NOTE : Office equipment shall be operable with one hand and/or shall not require two hands control, such as operations requiring users to operate a lever with one hand while supporting an object with the other hand.
- Example 1 Operable controls are operable with either hand, left or right.
- Example 2 Input operations do not require multiple keys to be pressed simultaneously.
- Example 3 The automatic document feeder can stop at any users desired position, so that users can set a document on the original platen glass with one hand.
- Example 4 Paper guide and document guide are set with one hand easily.
- i) Office equipment shall be operable with limited mobility in the arms, legs, fingers, or with artificial limbs.
- NOTE : Even when muscular weakness, paralysis, trembling hands, involuntary movements, and other causes make it difficult for users to accurately press control such as buttons, keys, and switches, the office equipment shall be operable with one hand, without requiring simultaneous combination operations.
- Example 1 Operable controls do not require tight grasping, pinching, or twisting of the wrist.
- Example 2 The main operation keys are designed as large as possible, with the surface of keys shaped concavely.
- Example 3 The start key has a key guard in order to prevent inadvertent operation.
- Example 4 The input parts of the touch screen use technology that recognize operations with artificial hands or the like.
- Example 5 The areas surrounding operable controls is left vacant, with space roughly equivalent to the size of a fist.

**4.3 Recommended requirements** The following requirements are recommended for ensuring and improving the information accessibility of office equipment:

- a) Office equipment should be operable without an excessive burden placed upon cognitive or memory abilities.

Information : See the Annex 1 (informative) of **JIS S 0024**.

- b) Office equipment should be operable irrespective of cultural and linguistic differences.

Example : The language of operable controls is selectable appropriate to users.

- c) Office equipment shall be operable for the first use.

NOTE : This provision does not apply to office equipment that requires professional training in order to learn how to operate the device.

Example 1 Voice instructions can guide users in the operation of the office equipment.

Example 2 The basic functions of the office equipment are operable intuitively without reference to the manual.

## 5 Requirements for operation

**5.1 Scope of accessible function and specifications** The basic functions of office equipment shall meet the information accessibility requirements specified in this part of **JIS X 8341**. Other expanded functions are within the scope of recommendation.

The functions of multifunction devices include copying, facsimile, printing, scanning, etc. The following provisions cover each scope of operation:

- a) Basic functions and scope of operation are given in Annex 1 (normative).
- b) Expanded functions and scope of operation are given in Annex 2 (informative).

**5.2 Equivalent information accessibility function requirements** Nothing in this part of **JIS X 8341** is intended to prevent the use of designs, functions, or technologies as alternatives to those prescribed in this part of **JIS X 8341** provided they result in substantially equivalent or greater access to and use of a product for elderly persons and persons with disabilities.

Example 1 Users who are blind or visually impaired can operate office equipment using voice command without using the control panel due to voice recognition technology, the LCD touch screen of the office equipment is otherwise inoperable by these users.

Example 2 By connecting other information technology (such as personal computers that has information accessibility features) to the office equipment such as multifunction devices and printers, it is possible to improve the information accessibility of the office equipment.

**5.3 Requirements for operation to be considered** Developers responsible for information accessibility should plan, develop, and design office equipment with due consideration of the following requirements of user's task so that users can achieve their planned task.

See Annex 1 (normative) and Annex 2 (informative) for task details.

Furthermore, an overview of operations related to work requirements is given below.

- a) **Access to office equipment** Office equipment placed on a desk or the floor should be designed so users have access to and can operate the office equipment easily without obstruction.
- b) **Operation procedures** Office equipment should provide user interfaces customizable based on the user's preference so that it is operable by the user.
- c) **Starting and ending operations** Office equipment should allow users to operate the start and stop controls independently. There are cases however, such as for facsimile, where the power is always on and the user therefore is not required to operate the power switch.
- d) **Confirmation of input and setting operations** Office equipment should provide multiple means for users to verify the input/setting result of their operations, so that this information is provided through at least two of the following senses: vision, hearing, and/or touch.
- e) **Consistency of operation** Office equipment should implement consistent and easy operation processes based on the user's perspective and behavior characteristic so that these processes are more intuitive and easier to understand.
- f) **Adjustment of display/voice** Where office equipment permits a user to adjust screen display or voice output settings, it should support functions for the user to adjust the setting according to his preferences.
- g) **Timed response** Where office equipment requires a timed response from a user, it should inform the user in advance of time limit and provide notification as to whether or not the time limit is adjustable.
- h) **Prevention of errors** Office equipment should prevent erroneous operation regardless of user's physical abilities.
- i) **Reverting to the initial state** Office equipment should return to the initial state with a simple operation, even if an operational error occurs in the middle of an operation.
- j) **Operation during errors** When office equipment is not functioning correctly, it should provide a method for a user to return the equipment to operable state, or should inform the user of the current status to contact a service person.

#### 5.4 Requirements for operation display

- a) **Display requirements** Display requirements are as follows:
  - 1) Text printed on operable controls shall be of an appropriate size and contrast.
    - The size of characters should be 5 mm or larger.
    - The contrast ratio should be 4:1 or higher.
  - 2) A screen display device should support advanced functions such as character enlargement and contrast adjustment.
  - 3) Colour coding shall not be used as the only method of providing information.

Example 1 The office equipment does not use colour-coding as the only method of selecting/setting features, for example it combines other methods, such as text-labels, with the use of colour.

**Example 2** The office equipment supports a combination of methods such as an indicator light on, off or flashing as well as the use of graphic symbols for status information on the display.

- 4) When colours are used in the operable controls, the colour schemes shall enable users with colour weakness to identify the controls easily.
- 5) When office equipment permits a user to adjust colour and contrast settings, a range of colour selections capable of producing a variety of contrast levels and colour schemes shall be provided.
- 6) Visibility from a seated position such as a wheelchair shall be provided.

**Example :** A display having a position and angle which is viewable from a seated position is provided.

- 7) When a blinking feature is used in a display, a blinking frequency not inducing photosensitive seizures shall be used.

**Information 1** The U.S. accessibility standards for electronics and information technology require that a flashing or blinking frequency greater than 2 Hz and lower than 55 Hz shall not be used. [See Section 508 Electronic and Information Technology Accessibility Standards (U.S. Rehabilitation Act, Section 508) (CFR Part 1194) 25(i)].

**Information 2** A blinking light may induce photosensitive seizure. The peak is time frequency of 20 Hz. Alternative blinking of red and blue is most likely to induce the seizure. Since this affects the safety of users, it states that the utmost care shall be taken (See **5.5.2** information of **JIS X 8341-2**).

- 8) Still images and moving images on a personal computer display shall be labeled with text describing the meaning of the images, when the office equipment is operated from a personal computer.

b) **Auditory information requirements** Auditory information requirements are as follows:

- 1) When office equipment utilizes a voice output feature, the voice output shall be listened to through a commercially available headphone or earphone.

**NOTE :** Auditory signals are excluded.

- 2) When office equipment utilizes a voice output feature, the ON and OFF state of the feature shall be discernible visually.
- 3) When office equipment utilizes a voice output feature, the ability to switch the device ON/OFF and adjust the volume shall be possible.

**Information :** According to the U.S. accessibility standards for electronic and information technology, when equipment delivers voice output in a public area, incremental volume control shall be provided with output amplification up to a level of at least 65 dB. Where the ambient noise level of the environment is above 45 dB, a volume gain of at least 20 dB above the ambient level shall be user-selectable. A function shall be provided to automatically reset the volume to the default level after

every use. [See Section 508 Electronic and Information Technology Accessibility Standards (U.S. Rehabilitation Act, Section 508) (CFR Part 1194) 25(f)].

- 4) When office equipment utilizes a voice output feature, it shall be possible to interrupt, pause, and restart the voice output.
- 5) When auditory signals are used to draw user's attention, Japanese Industrial Standards and other standards shall be followed.

Information : When users do faulty operations (such as when the device is not operating correctly), the product can notify users in some manner.

c) **Shape requirements** Shape requirements are as follows:

- 1) Keys important to operation, such as Start key and Stop key, shall be visually discernible and discernable through touch.

Example : The "5" key on a numeric keypad has a protrusion to make it distinguishable (See **JIS S 0011**).

- 2) Operable controls shall be shaped so that they can be used by those with orthopedic impairment.

d) **Operation requirements** Operation requirements are as follows:

- 1) When key repeat function is supported, the delay before repeat and the repeat rate shall be adjustable.

Information : According to the U.S. accessibility standards, if key repeat is supported, the delay before repeat shall be adjustable to at least 2 seconds. Key repeats rate shall be adjustable to 2 seconds per character. [See Section 508 Electronic and Information Technology Accessibility Standards (CFR Part 1194).23 (k) (3)].

- 2) Touch panel shall be operable even with aids such as prosthetic limbs.

Example : Electrostatic capacitance methods that do not work with prosthetic limbs are not used.

- 3) Timed response should not be required.

- 4) When a timed operation is required, the time shall be adjustable.

NOTE : When the time has run out, the office equipment shall be able to alert the user.

- 5) Office equipment shall be to return to the initial state at any time during operations.

NOTE : The initial state refers to the state resulting from canceling settings or shifting the mode through a reset key operation.

e) **Feedback requirements** Feedback requirements are as follows:

- 1) Except for the touch panel, control switches and keys shall show status that are discernible through touch or hearing as well as vision.

Example : When toggle switches are used to select a function between a copying function, facsimile function, and scanner function, the selected function is visually discernible, and discernible both through touch and sound.

- 2) The on and off state of the power switch shall be visually discernible, and discernible either through touch or hearing.

## 5.5 Requirements for mechanical operable controls

### a) **Position requirements** Position requirements are as follows:

- 1) Floor-type office equipment shall be operable from a seated position, including from a wheelchair.
- 2) Floor-type office equipment shall have at least one paper feed tray in a position that is operable from a seated position, including from a wheelchair.

Information : According to the U.S. accessibility standard, the operable controls on the following types of floor-type office equipment are to be positioned within measurement standards [See Section 508 Electronic and Information Technology Accessibility Standards (CFR Part 1194).25 (j)].

Independent-type products that are not portable, and which are designed to be installed and used, with an operable control device, shall comply with the following items:

- The position of any operable control shall be determined with respect to a vertical plane, which is 1 220 mm in length, centered on the operable control, and at the maximum protrusion of the product within the 1 220 mm length of this part).
- Where any operable control is 255 mm or less behind the reference plane, the height shall be 1 370 mm maximum and 380 mm minimum above the floor.
- Where any operable control is more than 255 mm and not more than 610 mm behind the reference plane, the height shall be 1 170 mm maximum and 380 mm minimum above the floor.
- Operable controls shall not be more than 610 mm behind the reference plane.

### b) **Shape requirements** Shape requirements are as follows:

- 1) The shape of operable controls shall be easily discernable.

NOTE : The handle and the operation direction or operable controls are easily discernable.

- 2) Shape of operable controls shall be operable with one hand.
- 3) Shape of operable controls shall be operable even when hands and fingers have restricted mobility.

### c) **Operation requirements** Operation requirements are as follows:

- 1) Operable controls shall be operable with one hand.



- 2) Operable controls shall be operable even when hands and fingers have restricted in mobility.
- 3) Operable controls shall not require tight grasping, pinching, or twisting of the wrist by a user.

Example 1 When paper is supplied, and the paper feed tray is pulled out for storing paper, it is possible to perform this operation with impairments in the hands, with a usual grip, and underhanded.

Example 2 The paper feed tray can be pulled out with a button operation.

- 4) Office equipment shall be operable with a suitable amount of force.

Information : According to the U.S. accessibility standards, operational force shall be 22.2 N or less. [See Section 508 Electronic and Information Technology Accessibility Standards (CFR Part 1194).23 (k) (2)].

- 5) Compound operations such as pushing while turning shall be avoided.

**5.6 Requirements for terms** Easy-to-understand expressions and terms shall be used for operation-related terms, regardless of cultural and linguistic differences, and without requiring specialized knowledge. Descriptions of terms shall be provided as necessary.

Example 1 When graphic characters such as pictographic characters are used, text-based notation are used as well.

Example 2 Icons are used as well as text.

Example 3 Languages can be switched easily.

Example 4 Terms used for the office equipment complies with legislation, Japanese Industrial Standards, special nomenclature, or other such terminology.

Example 5 Specialized terminology and abbreviations are not used much.

**5.7 Alternate methods** If specific product operations are difficult, then the following alternate methods shall be provided in order to enable the operations based on alternate physical abilities.

- a) Assistive technologies for elderly persons and persons with disabilities are usable as necessary.
- b) When alternate methods can be connected and disconnected, the status should be confirmed through multiple methods.
- c) When office equipment is operable with a personal computer, the necessary functions for users shall be operable with the keyboard or other such methods. In this case, ensure that assistive technology such as screen reader can be connected.

**5.8 Requirements for operation environment** The environment where office equipment is used shall be considered and situation of users and the effect on the people in that environment shall be considered. The users shall be able to easily access the office equipment when they use it.

- Example 1 The instruction manual clearly specifies the space required for using the office equipment by giving consideration to the location where it will be installed, as well as the surrounding area.
- Example 2 The information regarding the surrounding space required for wheelchair users to access the office equipment is available to users.
- Example 3 Ensure that there is enough space so that wheelchair users can rotate with a diameter of 1 500 mm in front of the office equipment. See Japan's [Act on Buildings Accessible and Usable by the Elderly and Physically Disabled (the "Heart Building Law")].
- Example 4 Ensure that the floor surrounding the office equipment does not have difference in level or slopes that can interfere with the movement of wheelchair users. Uneven flooring can cause wheelchair users accidents.
- Example 5 The front surface of the office equipment is given a concave shape, in order to make it easy for wheelchair users to approach the control panel.
- Example 6 Sufficient illumination is provided so that people with weak eyesight and elderly persons can operate the office equipment.

**5.9 Requirements for information security** An operation method with security ensured shall be provided to access the information of office equipment.

However, when office equipment uses biometrics to identify users, it shall provide alternate methods not requiring the user's specific physical characteristics.

- Example 1 When physical characteristics such as fingerprints, voiceprints, and retina scans are used to identify users, alternate individual identification functions is provided without requiring any physical characteristics.
- Example 2 An interface to select multiple authentication methods, such as fingerprints, retina scans, and vein certification, are provided.
- Example 3 When office equipment utilizes a voice output feature, it is possible to hear the output through earphones and other such devices.

**5.10 Requirements for maintenance such as care and parts replacement by users** The maintenance and parts replacement required for the continuous use of office equipment should be easily performed.

NOTE : In the case of floor-type copying machines and other such equipment where user maintenance is not recommended (for instance, where it is difficult to ensure safety), except it. This requirement does not apply to office equipment such as copying machines which do not allow users to contact maintenance (such as when it is difficult to ensure user safety).

- Example 1 User can easily perform such tasks as supplying paper and replacing toner units.
- Example 2 Wheelchair users can easily supply paper.

**5.11 Allergy considerations** Materials that could cause allergy should not be used in controls where users operate.

Example 1 When assistive technology or assistive accessories are provided, follow the same standard as for normal equipment in confirming any materials could not cause allergy.

Example 2 Adhesive and coating materials that generate volatile organic compounds (VOCs) are used as infrequently as possible not to cause allergy.

**6 Basic requirements for plan, development, and design** In order to ensure and improve information accessibility, the developer shall plan, develop, and design office equipment to meet the basic requirements under the provisions of this part of JIS X 8341.

NOTE : Model changes shall not result in a loss in the quality of information accessibility already provided.

Example 1 Developers utilize an information accessibility checklist during the plan, design, and evaluation phases.

Example 2 Developers set the goal considering elderly persons and persons with disabilities at product planning phase and have a usability test (by elderly persons and persons with disabilities) evaluate during the product development, and reflect the evaluation results to product.

**6.1 Disclosure of information related to information accessibility** When users purchase and use office equipment, the provider of office equipment shall provide the user with information related to the information accessibility of the office equipment, so that the user can easily select an office equipment with the appropriate information accessibility features to match the user needs.

Example 1 The corporation's public Web site can be used to obtain information related to the information accessibility of office equipment.

Example 2 Industry groups put information related to the information accessibility of office equipment on their Web sites.

Example 3 The corporation's public Web site can be used by screen readers.

**6.2 Requirements for evaluation** The provider of office equipment shall evaluate the information accessibility of that equipment and shall provide a procedure present the record of the evaluations as requested from user.

Information : See Annex 1 (normative) and Annex 2 (informative) for the details of evaluation tasks.

**6.3 Requirements for user feedback** Developer for office equipment should have a contact points for gathering user feedback, and should reflect these feedbacks in ensuring and improving the information accessibility of office equipment.

Example 1 Methods for gathering information are established to improve the customer satisfaction level with respect to the information accessibility office equipment.

Example 2 Customer service representatives with multiple communication methods such as telephone, facsimile and e-mail are provided.

Example 3 System gathering opinions from users on a web site and transmitting the opinions to the planning and development departments is established.

**6.4 Requirements for user support** Information accessibility and compatibility descriptions shall be provided to users through an appropriate method. Also, customer service representative shall be provided to users. And multiple access methods shall be available for users with disabilities to communicate with the service representative.

Example 1 Another communication methods such as through facsimile and e-mail as well as telephone is provided to support users.

Example 2 The instruction manual is provided with text large enough for elderly persons to read without difficulty, and also is provided in an electronic medium.

Example 3 Electronic documents are provided for visually impaired users to understand with screen reader software.

Example 4 The information about the accessibility feature of the office equipment is provided to the related sales outlets, information service corporations, and caregivers as well.

## Annex 1 (normative)

### Basic functions and scope of operation

**1 Scope** This Annex regulates the details of basic functions and the scope of operation.

**2 Basic functions and the scope of operation** The standard scope of operation for operating equipment is the “basic scope of operation”, and this scope of tasks is regulated. Basic operations are the main functions provided by office equipments, within the scope of operations related to the common functions of that product category, and not within the scope of operations related to extrinsic functions. The target office equipment products are copying machines, multifunction devices, and page printers used in office environment.

- The basic functions of office equipment are copying functions (able to duplicate documents) (see Annex 1 table 1), facsimile functions (able to send and receive documents) (see Annex 1 table 2), printing functions (able to print documents) (see Annex 1 table 3), and scanning functions (able to scan and save documents) (see Annex 1 table 4).
- The basic functions of office equipment shall be operable by at least one of the users indicated in 4.2 of the text. Consideration should also be given for enabling users to operate the functions in the case outlined in 4.3 of the text as well.

**Annex 1 Table 1 Copying functions**

Task	Operation	Operation task
Access <sup>(1)</sup>		
Preparation	a) Setting the document	
	1) Original platen glass	Open the automatic document feeder (ADF) or the platen cover.
		Place the document on the original platen glass.
		Confirm the document setting position.
		Close the ADF or the platen cover.
	2) ADF tray	Place the document in the ADF.
		Adjust the document guide.
		Confirm the document position.
Job Settings	a) Function selection	Select the copy function <sup>(2)</sup> .
	b) Setting	Use key input to set the number of copies.
Operation	a) Startup	Press the (copy) start key.
Completion	a) Document removal	
	1) Original platen glass	Open the ADF or the platen cover.
		Remove the document from the original platen glass.
		Close the ADF or the platen cover.
	2) ADF original document receiving tray	Remove the document from the ADF.
	b) Copy removal	Take the copied paper out.

### Annex 1 Table 1 (concluded)

Notes <sup>(1)</sup> There shall be no barriers to access the operable controls within the scope of basic operations above. Also, the position of operable controls shall be understandable. Furthermore, the operation functions of keys and other controls shall be discernible.

<sup>(2)</sup> When a multifunction device provides multiple functions, users shall be able to select the desired function.

### Annex 1 Table 2 Facsimile functions

Task	Operation	Operation task
Access <sup>(1)</sup>		
Preparation	a) Setting the document	
	1) Original platen glass	Open the automatic document feeder (ADF) or the platen cover.
		Place the document on the original platen glass.
		Confirm the document setting position.
		Close the ADF or the platen cover.
	2) ADF tray	Place the document in the ADF.
		Adjust the document setting guide.
		Confirm the document position.
Job settings	a) Function selection	Select the facsimile function <sup>(2)</sup> .
	b) Setting	Specify the destination for transmission with key input.
Operation	a) Startup	Press the (facsimile transmission) start key.
	b) Transmission	Confirm the results of transmission.
Completion	a) Document removal	
	1) Original platen glass	Open the ADF or the platen cover.
		Remove the document from the original platen glass.
		Close the ADF or the platen cover.
	2) ADF original document receiving tray	Remove the document from the ADF.
	b) Reception <sup>(3)</sup>	

Note <sup>(3)</sup> The reception refers to automatic reception.

**Annex 1 Table 3 Printing functions**

Task	Operation	Operation task
Access <sup>(1)</sup>		
Preparation	a) Paper supply (Paper feed tray or paper feed cassette)	Paper supply operation.
		Open the paper feed tray or paper feed cassette.
		Set the paper.
		Close the paper feed tray or paper feed cassette.
Job settings	a) Driver startup	Start the client (personal computer) operations and driver <sup>(4)</sup> .
	b) Setting	Set the number of printouts.
Operation	a) Startup	Press the task execution key from the personal computer.
Completion	a) Print receiving tray	Take the printed paper out.

Note <sup>(4)</sup> Items dependent on the OS are excluded.

**Annex 1 Table 4 Scanning functions**

Task	Operation	Operation task
Access <sup>(1)</sup>		
Preparation	a) Setting the document	
	1) Original platen glass	Open the automatic document feeder (ADF) or the platen cover.
		Place the document on the platen glass.
		Confirm the document setting position.
		Close the ADF or the original platen cover.
	2) ADF tray	Place the document in the ADF
		Adjust the document setting guide.
		Confirm the document position.
Job settings	a) Function selection	Select the scanner function. <sup>(2)</sup>
Operation	a) Startup	Press the (scanner) start key.
Completion	a) Document removal	
	1) Original platen glass	Open the ADF or the platen cover.
		Remove the document from the original platen glass.
		Close the ADF or the platen cover.
	2) ADF original document receiving tray	Remove the document from the ADF.

- Remarks 1 These tables show standard models. In some cases, the combination of functions and specific operation methods may vary, depending on the office equipment.
- 2 In the case of a standalone page printer, users shall be able to turn the power on and off.

## Annex 2 (informative)

### Expanded functions and scope of operation

This Annex is to supplement the matters related to the text and Annex (normative), and not to constitute the provisions of this Standard.

This Annex indicates the scope of expanded functions for operating office equipments, as well as the scope of associated tasks. The expanded scope corresponds to the specifications of that particular equipment, and so recommendation examples are provided as achievement objectives.

Also note that the shaded parts in Annex 2 table 1 to Annex 2 table 4 are the same as in Annex 1 (the scope of basic operations).

**Annex 2 Table 1 Copying functions**

Task	Operation	Operation task
Access <sup>(1)</sup>		
Preparation	a) Power management	Turn on the power.
	b) Paper supply Paper feed tray or paper feed cassette	Paper supply operation. <sup>(5)</sup>
	c) Setting the document	
	1) Original platen glass	Open the automatic document feeder (ADF) or the platen cover.
		Place the document on the original platen glass.
		Confirm the document setting position.
		Close the ADF or the platen cover.
	2) ADF tray	Place the document in the ADF.
		Adjust the document guide.
		Confirm the document position.
Job settings	a) Function selection	Select the copy function <sup>(2)</sup> .
	b) Setting	Use key input to set the number of copies.
	c) Application function	Set the density, paper size, zoom, reduction, stapling, sorting, and duplex settings <sup>(6)</sup> .
		Confirm the settings.
Operation	a) Startup	Press the (copy) start key.
Completion	a) Document removal	
	1) Original platen glass	Open the ADF or the platen cover.
		Remove the document from the original platen glass.
		Close the ADF or the platen cover.
	2) ADF original document receiving tray	Remove the document from the ADF.
	b) Copy removal	Take the copied paper out.
	c) Power management	Turn off the power.

Notes <sup>(5)</sup> The paper supply operations using the paper feed tray or paper feed cassette for copying and facsimile functions conform to the printing function.

<sup>(6)</sup> It is also possible to use the duplex copying functions that are settable by default.



**Annex 2 Table 2 Facsimile functions**

Task	Operation	Operation task
Access <sup>(1)</sup>		
Preparation	a) Paper supply Paper feed tray or paper feed cassette	Paper supply operation. <sup>(5)</sup>
	b) Setting the document	
	1) Original platen glass	Open the automatic document feeder (ADF) or the platen cover. Place the document on the original platen glass. Confirm the document setting position. Close the ADF or the platen cover.
	2) ADF tray	Place the document in the ADF. Adjust the document setting guide. Confirm the document position.
Job Settings	a) Function selection	Select the facsimile function <sup>(2)</sup> .
	b) Setting	Specify the destination for transmission with key input. Input the speed dial number.
Operation	a) Startup	Press the (facsimile transmission) start key.
	b) Transmission	Confirm the results of transmission.
Completion	a) Document removal	
	1) Original platen glass	Open the ADF or the platen cover. Remove the document from the original platen glass. Close the ADF or the platen cover.
	2) ADF original document receiving tray	Remove the document from the ADF.
	b) Reception <sup>(3)</sup>	

**Annex 2 Table 3 Printing Functions**

Task	Operation	Operation task
Access <sup>(1)</sup>		
Preparation	a) Power management	Turn on the power.
	b) Paper supply Paper feed tray or paper feed cassette	Paper supply operation <sup>(5)</sup>
		Open the paper feed tray or paper feed cassette.
		Set the paper.
		Close the paper feed tray or paper feed cassette.
Job Settings	a) Driver startup	Start the client (personal computer) operations and driver <sup>(4)</sup> .
	b) Setting	Set the number of printouts.
	c) Application function	Set stapling, sorting, and other such settings.
Operation	a) Startup	Press the task execution key from the personal computer.
Completion	a) Print receiving tray	Take the printed paper out.
	b) Power management	Turn off the power.

**Annex 2 Table 4 Scanning functions**

Task	Operation	Operation task
Access <sup>(1)</sup>		
Preparation	a) Power management	Turn on the power.
	b) Setting the document	
	1) Original platen glass	Open the automatic document feeder (ADF) or the platen cover.
		Place the document on the original platen glass.
		Confirm the document setting position.
		Close the ADF or the platen cover.
	2) ADF tray	Place the document in the ADF.
		Adjust the document setting guide.
		Confirm the document position.
Job Settings	a) Function selection	Select the scanner function <sup>(2)</sup> .
	b) Driver startup	Start the client (personal computer) and main unit operation and the scanning driver.
	c) Application function	Set transmission.
Operation	a) Startup	Press the task execution key from the personal computer.
Completion	a) Document removal	
	1) Original platen glass	Open the ADF or the platen cover.
		Remove the document from the original platen glass.
		Close the ADF or the platen cover.
	2) ADF original document receiving tray	Remove the document from the ADF.
	b) Power management	Turn off the power.

NOTE : These tables shows standard models. In some cases, the combination of functions and specific operation methods may vary, depending on the equipment.

#### Related Standards

- JIS S 0024 *Guidelines for older persons and persons with disabilities—Housing equipment*
- JIS X 8341-2 *Guidelines for older persons and persons with disabilities—Information and communications equipment, software and services—Part 2: Information processing equipment*
- JIS Z 8071 *Guidelines for standards developers to address the needs of older persons and persons with disabilities*

#### Bibliography

Section 508 Electronic and Information Technology Accessibility Standards (CFR Part 1194), Act on Buildings Accessible and Usable by the Elderly and Physically Disabled (the “Heart Building Law”)

Errata for JIS (English edition) are printed in *Standardization Journal*, published monthly by the Japanese Standards Association, and also provided to subscribers of JIS (English edition) in *Monthly Information*.

Errata will be provided upon request, please contact:  
**Standards Promotion Department, Japanese Standards Association**  
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN  
TEL. 03-3583-8002 FAX. 03-3583-0462